

In the Claims:

Please rewrite Claim 1 in amended form to read as follows:

a¹
1. An electro-mechanical machine, comprising:

a field producing assembly having a cup-shaped air gap which is circumferentially disposed about an axis of rotation, a portion of the air gap remote from the axis extending in a direction lateral to the remainder of the air gap, the field producing assembly producing a circumferential distribution of magnetic flux in the cup-shaped air gap having N periodic extremes of flux density about the axis, the flux in said portion being substantially perpendicular to the direction of extension of the portion; and

a cup-shaped electrical assembly disposed in the air gap and including a circular array of C non-overlapping coils on one of an inner and outer face of the electrical assembly;

the field producing and electrical assemblies being mounted so as to be relatively rotatable about said axis of rotation.

Please rewrite Claims 6 and 8 in independent form to read as follows:

a²
6. An electro-mechanical machine, comprising:

a field producing assembly having a cup-shaped air gap which is circumferentially disposed about an axis of rotation, the field producing assembly producing a circumferential distribution of magnetic flux in the cup-shaped air gap having N periodic extremes of flux density about the axis;

a 2nd amended.
a cup-shaped electrical assembly disposed in the air gap and including
a circular array of C non-overlapping coils on one of an inner and outer face of the
electrical assembly;

the field producing and electrical assemblies being mounted so as to
be relatively rotatable about said axis of rotation; and

a first subset of C coils circularly disposed on one of two angularly
disposed surfaces of said electrical assembly and a second subset of C coils
cylindrically disposed on the other of said two surfaces, each coil in the first
subset being axially aligned with a corresponding coil in the second subset.

a 3
8. An electro-mechanical machine, comprising:

a field producing assembly having a cup-shaped air gap which is
circumferentially disposed about an axis of rotation, the field producing assembly
producing a circumferential distribution of magnetic flux in the cup-shaped air gap
having N periodic extremes of flux density about the axis;

a cup-shaped electrical assembly disposed in the air gap and including
a circular array of C non-overlapping coils on one of an inner and outer face of the
electrical assembly;

the field producing and electrical assemblies being mounted so as to
be relatively rotatable about said axis of rotation; and

said field producing assembly comprises N circumferentially spaced
magnet subassemblies disposed on one side of said air gap, each magnet subas-

a3
amended

sembly being generally L-shaped in a cross-section taken through said axis and being magnetically polarized opposite to a next adjacent magnet subassembly in a direction normal to the air gap.

Please rewrite Claim 18 in amended form to read as follows:

a4

18. The machine of claim 2 wherein each coil extends over two angularly disposed surfaces of said electrical assembly.

[Please rewrite Claim 19 in independent form to read as follows:]

19. An electro-mechanical machine, comprising:

a field producing assembly having a cup-shaped air gap which is circumferentially disposed about an axis of rotation, the field producing assembly producing a circumferential distribution of magnetic flux in the cup-shaped air gap having N periodic extremes of flux density about the axis;

a cup-shaped electrical assembly disposed in the air gap and including a circular array of C non-overlapping coils on one of an inner and outer face of the electrical assembly;

the field producing and electrical assemblies being mounted so as to be relatively rotatable about said axis of rotation; and

a circular array of C non-overlapping coils on each of an inner and outer face of the electrical assembly with the coils on one face being angularly offset from the coils on the other face; and